FIGURE 1

P2P cDNA
(5173 base pairs)

5' ╎───────────────────────────────────────╎────╎ -3'
1 └─139   **Open Reading Frame**   4353─┘   5173
              (4214 base pairs)

P2P cDNA Deduced Protein
(1404 amino acids)

1   1404

GST P2P
(1-332)

GST P2P
(484-688)

GST P2P
(753-908)   GST P2P
                (918-1095)
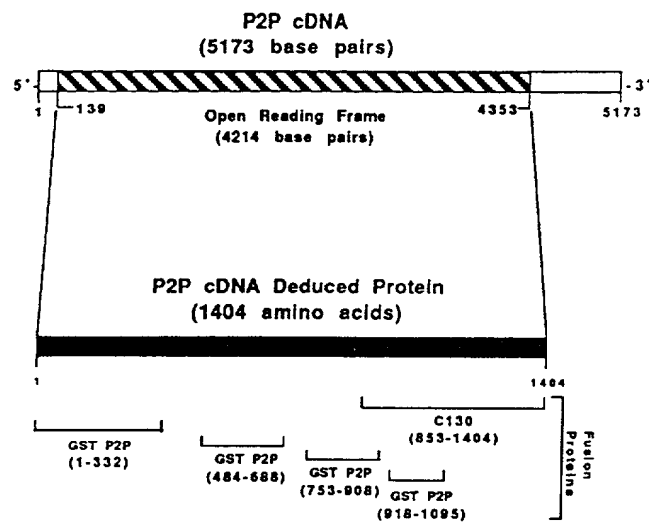
C130
(853-1404)

Fusion
Proteins

FIGURE 2

```
MMEVKDPNMKGAMLTNTGKYAIPTIDAEAYAIGKKKEKPPFLPEEPSSSSEEDDPIPAELL  60
```

```
CLICKDIMTDAVVIPCCGNSSCDECIRTTLLESDKHTCPTC HQNDVSPDALIANKFLRQA  120
```

```
VNNFKNETGYTKRLRKQLPPFLFLVPPPRPLSQRNLQPRSRSPILRQQDPVVFRYTVSPT  180
CSDTKTAGSCSDSGTLSRLPAPSISSLTSNQSSLAPPVSGNPSSAPAPVPDITATVSISV  240
HSEKSDGPFRDSDNKLLPAAALTSEHSKGASSIAITALMEEKGVPGTSPWNSIFVGQSLL  300
HGQLIPTTGPVRINAARPGGGRPGWEHSNKLGYLVSPPQQIRRGERSCYRSINRGRHHSE  360
RSQRTQSPSLPATPCFVPVPPPPLYPPPPHTLPLPPGVPPPQFSPQFPSSQPPTAGYSVP  420
PPGFPPAPANISTACFSPGVPTAHSNTMPTTQAPLLSREEFYREQNDKGRESKFPYSGSS  480
YSRSSYTDSSQGLAQHIHALTLSPSAAHTLDLLHDHPHPPEEAEARSAMIVHMPDLMDIA  540
HARSRSPPYRRYRSRSRSPPEFRGQSPTKRNVPREEKEREYFNRYREVPPPYDIKAYYGR  600
SVDFRDPFEKERYREWERKYREWYEKYYKGYAVGAQPRPSANREDFSPERLLPLNIRNSP  660
FTRGRREDYAAGQSHRNRNLGGNYPEKLSTRDSHNAKDNPKSKEKESENVPGDGKGNKHK  720
KHRKRRNEEKGEESESFLNPELLETSRKCRGSSGIDETKTDTLFVLPSRDDATPVRDEPM  780
DAESITFKSVSDKDKREKDKPKVKSDKTKRKSDGSATAKKDNVLKPSKGPQEKVDGDREK  840
SPRSEPPLKKAKEEATKIDSVKPSSSSQKDEKVTGTPRKAHSKSAKDTRRQSQPRTRRSK  900
RTVPKTSSQKSQPVRTRRPRSLRKINYLIAREKNEREKRKKSVDKDFESSSMKISKVEGT  960
EIVKPSPKRKMEGDVEKLERTPEKDKIASSTTPAKKIKLNRETGKKIGNAENASTTKEPS  1020
EKLESTSSKIKQEKVKGKAKRKVAGSEGSSSTLVDYTSTSSTGGSPVRKSEEKTDTKRTV  1080
IKTMEEYNNDNTAPAEDVIIMIQVPQSKWDKDDFESEEEDVKTTQPIQSVGKPSSIIKNV  1140
TTKPSATAKYTEKESEQPEKLQKLPKEASHELMQHELRSSKGSASSEKGRAKDREHSGSE  1200
KDNPDKRKSGAQPDKESTVDRLSEQGHFKTLSQSSKETRTSEKHESVRGSSNKDFTPGRD  1260
KKVDYDSRDYSSSKRRDERGELARRKDSPPRGKESLSGQKSKLREERDLPKKGAESKKSN  1320
SSPPRDKKPHDHKAPYETKRPCEETKPVDKNSGKEREKHAAEARNGKESSGANCHVYLTR  1380
QTLPWRRSWLLGRWRRAPSSRNPS                                      1404
```
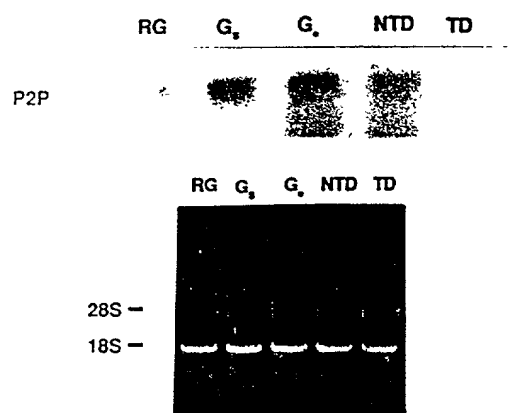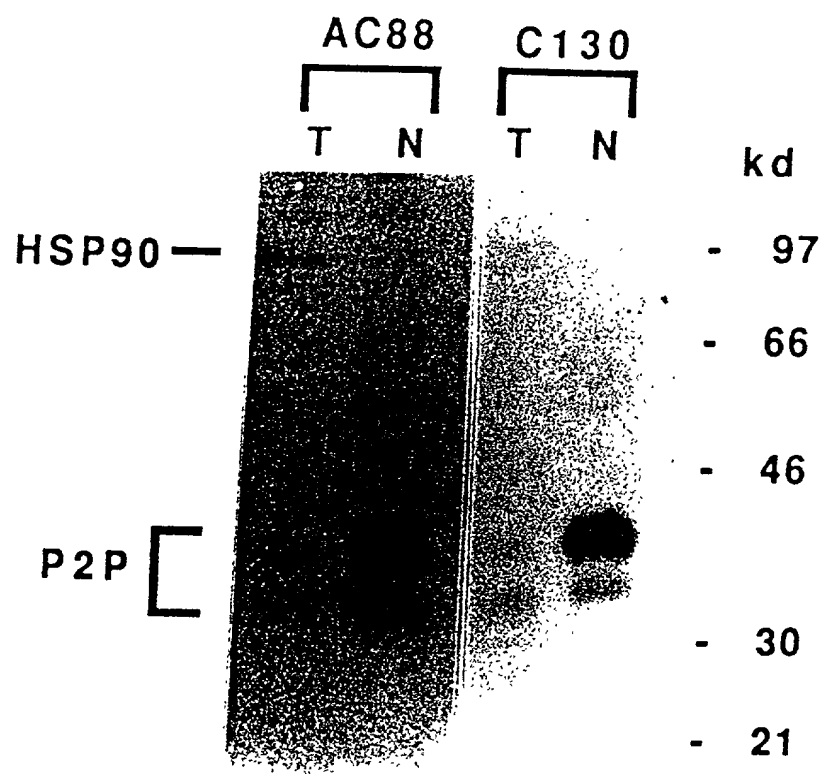
FIGURE 3

A.

B.

FIGURE 4

AAGAATCAATGCTGCTCG

1140
*

TACCTAGTTTCTCCACCA

)
.
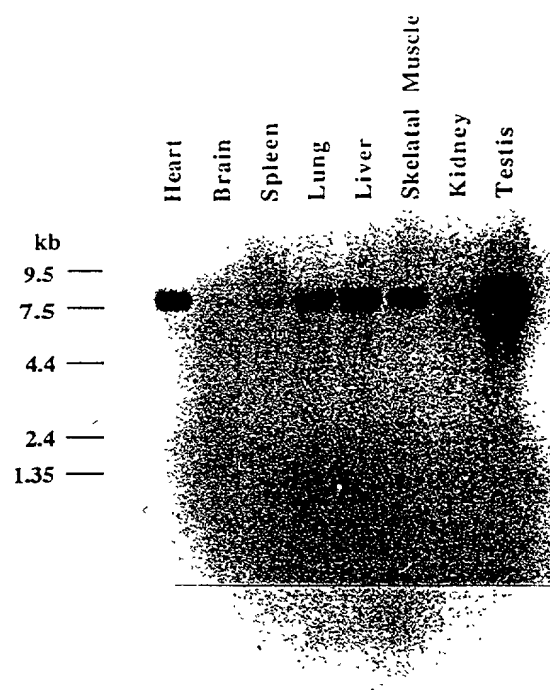
GCGGGCGACACCACAGCG

CTTTGTGCCCGTTCCACC

GGTGTACCTCCTCCACAG

GTGTCCCTCCTCCAGGAT

TGTTCCCACTGCCCATTC

TTCTATAGAGAGCAAAAC

CAAGAAGTTCATACACTG

TCCTTCAGCTGCTCACAC

GCAAGATCTGCAATGATT

CACCTCCCTATAGACGAT

CACTAAACGTAATGTACC

1920
*

CCACCCCCTTATGACATC

1980
*

AAGAACGCTACCGGGAAT

2040
*

GCGGTGGGAGCTCAACC

2100
*

CTCTTAATATCAGAAAT

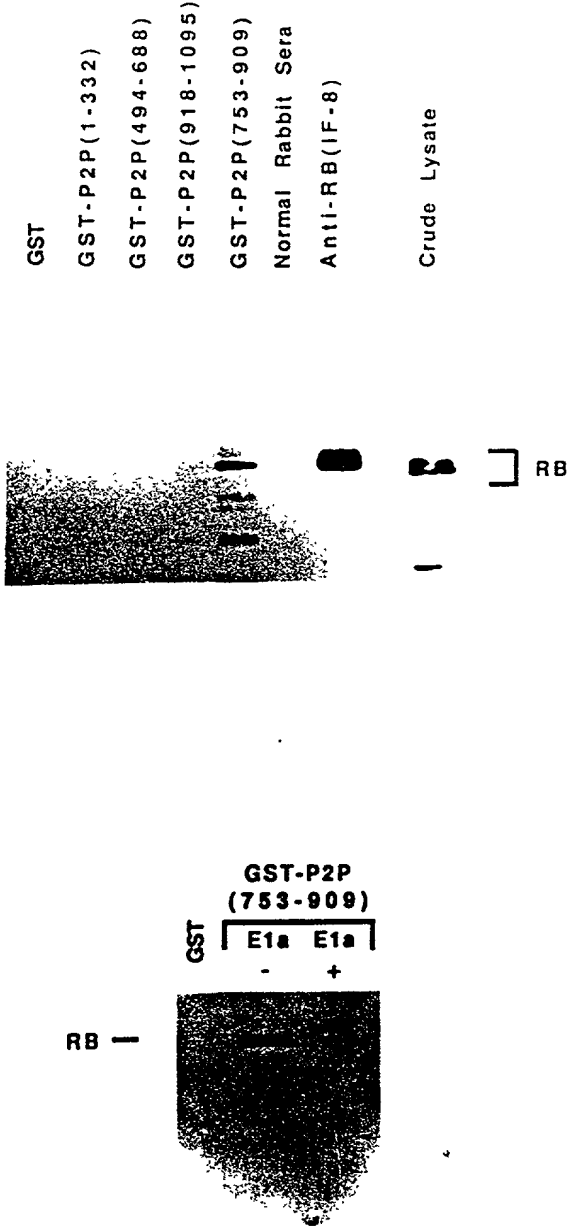FIGURE 5

FIGURE 6 (1/5)

```
                                                           60
                                                           *
AGGTCCACCACCTCCATCTTACACCTGCTTTCGTTGTGGTAAACCTGGTCATTATATTAAGAAT

                                                          120
                                                          *
TGCCAACAAATGGGGATAAGAACTTTGAATCTGGTCCTAGGATCAAAAAGAGCACTGGAATTCC

                                                    180
                                                    *
TAGAAGTTTTATGATGGAAGTGAAAGATCCTAACATGAAAGGTGCAATGCTTACCAACACTGGA

                                             240
                                             *
AAATATGCAATACCAACTATAGATGCAGAGGCCTATGCAATCGGGAAGAAAGAGAAACCACCCT

                                        300
                                        *
TCTTACCAGAGGAGCCATCATCATCTTCAGAAGAAGATGATCCTATCCCAGCAGAGCTCTTGTG

                                   360
                                   *
CCTCATCTGCAAAGACATCATGACTGATGCTGTGGTCATTCCCTGCTGTGGAAACAGTTCATGT

                               420
                               *
GATGAATGTATAAGAACGACACTCTTGGAGTCAGATAAACATACATGTCCAACATGTCACCAAA

                            480
                            *
ATGATGTTTCTCCTGATGCTTTAATTGCCAACAAGTTTTTACGACAGGCTGTTAATAACTTTAA

                         540
                         *
AAATGAAACTGGCTATACAAAACGACTACGAAAACAGTTACCTCCATTTTTATTTTTAGTACCA

                    600
                    *
CCACCAAGACCACTCAGTCAGCGGAACCTACAGCCTCGTAGTAGATCTCCAATACTAAGACAGC

                 660
                 *
AGGATCCTGTAGTATTCAGGTACACTGTCTCGCCTACCTGCTCCGATACTAAGACAGCAGGATC

            720
            *
CTGTAGTGATTCAGGTACACTGTCTCGCCTACCTGCTCCGTCTATATCTTCATTAACTTCTAAT

         780
         *
CAGTCTTCCTTGGCCCCTCCTGTGTCTGGAAATCCGTCTTCTGCTCCAGCTCCAGTACCTGATA

      840
      *
TAACTGCAACCGTGTCTATATCAGTCCACTCAGAAAAAATCGGATGGACCTTTTCGGGATTCTGA

900                                                        960
*                                                          *
TAATAAATTATTGCCAGCTGCCGCCCTTACATCAGAACATTCAAAGGGAGCCTCTTCAATTGCT

                                                     1020
                                                     *
ATTACTGCTCTTATGGAAGAAAAAGGGGTACCAGGTACCAGTCCTTGGAACTCCATCTTTGTTG

                                                    1080
```

FIGURE 6 (2/5)

GACAGTCATTATTACATGGACAGTTGATTCCCACAACTGGCCCAGTAₐGAATCAATGCTGCTCG

1140

TCCAGGTGGTGGCCGGCCAGGCTGGGAGCATTCCAACAAGCTTGGGTACCTAGTTTCTCCACCA

1200

CAGCAAATTAGAAGAGGAGAAAGAAGCTGTTACAGAAGTATAAACCGCGGGCGACACCACAGCG

1260

AACGATCACAGAGGACTCAAAGCCCATCACTTCCAGCAACTCCATGCTTTGTGCCCGTTCCACC

1320

ACCTCCTTTGTATCCGCCTCCTCCCCATACACTTCCTCTTCCTCCAGGTGTACCTCCTCCACAG

1380

TTTTCTCCTCAGTTTCCCTCCTCCCAGCCTCCAACAGCAGGATATAGTGTCCCTCCTCCAGGAT

1440

TTCCACCAGCTCCTGCCAATATATCAACAGCTTGCTTTTCACCAGGTGTTCCCACTGCCCATTC

1500

AAATACCATGCCCACAACACAAGCACCTCTTTTGTCCAGGGAAGAATTCTATAGAGAGCAAAAC

1560

GACAAAGGAAGAGAGTCTAAATTTCCCTATAGTGGGTCATCGTATTCAAGAAGTTCATACACTG

1620

ACTCAAGTCAAGGTCTGGCTCAACACATTCACGCTCTTACTCTCAGTCCTTCAGCTGCTCACAC

1680

TCTCGATCTTCTTCACGATCATCCCCATCCTCCAGAAGAGGCAGAGGCAAGATCTGCAATGATT

1740

GTTCACATGCCAGATCTCATGGATATCGCCCATGCTAGGTCAAGGTCACCTCCCTATAGACGAT

1800

ATCGCTCACGGTCCAGATCTCCTCCAGAATTTAGGGGACAGTCTCCCACTAAACGTAATGTACC

1860   1920

TCGAGAAGAGAAAGAACGTGAGTATTTTAATAGATACAGAGAAGTTCCACCCCCTTATGACATC

1980

AAAGCCTATTATGGGCGGAGTGTCGACTTTAGAGACCCATTTGAGAAAGAACGCTACCGGGAAT

2040

GGGAAAGGAAATACCGAGAGTGGTATGAGAAGTACTACAAAGGGTACGCGGTGGGAGCTCAACC

2100

TAGACCCTCAGCCAATAGAGAGGACTTTTCTCCAGAGAGACTCTTACCTCTTAATATCAGAAAT

FIGURE 6 (3/5)

2160
*

TCACCCTTCACAAGAGGCCGCAGAGAAGACTATGCTGCTGGACAAAGTCATAGAAATAGAAATC

2220
*

TAGGTGGCAACTATCCAGAAAAGCTTTCAACAAGGGACAGTCACAATGCAAAAGATAATCCAAA

2280
*

ATCGAAGGAGAAGGAGAGTGAGAATGTTCCAGGAGACGGCAAAGGGAACAAGCATAAGAAACAC

2340
*

AGGAAACGAAGAAACGAAGAAAAGGGGGAAGAGAGTGAGAGCTTCCTGAACCCAGAGCTACTGG

2400
*

AGACGTCTAGGAAATGCAGGGGATCGTCAGGGATTGATGAAACGAAGACAGATACACTGTTTGT

2460
*

TCTCCCAAGCAGAGACGATGCTACACCTGTTAGGGATGAGCCAATGGACGCAGAATCGATCACT

2520
*

TTCAAGTCAGTATCTGACAAAGACAAGAGGGAAAAGGATAAGCCAAAAGTAAAAAGTGACAAGA

2580
*

CCAAACGGAAAAGTGACGGGTCTGCTACAGCCAAGAAAGACAATGTTTTAAAACCTTCTAAAGG

2640
*

ACCTCAAGAAAAGGTAGATGGAGACCGTGAAAAGTCTCCTCGGTCTGAGCCGCCACTCAAAAAA

2700
*

GCCAAAGAGGAGGCTACAAAGATTGACTCTGTAAAACCTTCCTCGTCTTCTCAGAAGGATGAGA

2760
*

AGGTCACTGGAACCCCTAGAAAAGCCCATTCTAAATCTGCAAAAGACACCAGGAGGCAAAGCCA

2820   2880
*   *

GCCAAGGACGAGAAGGTCAAAAAGGACTGTTCCAAAGACATCAAGTCAGAAAAGCCAGCCAGTA

2940
*

AGGACGAGAAGGCCAAGAAGCCTGAGAAAAATAAACTACTTGATAGCAAGGGAGAAAAACGAAA

3000
*

GAGAAAAACGGAAGAAGAGTGTAGATAAAGATTTTGAGTCGTCTTCAATGAAAATCTCTAAAGT

3060
*

AGAAGGAACAGAAATAGTGAAACCATCACCAAAACGGAAAATGGAAGGTGATGTTGAAAAGCTG

3120
*

GAAAGGACCCCAGAAAAGGACAAGATTGCATCATCAACTACTCCAGCCAAAAAAATCAAACTCA

3180
*

FIGURE 6 (4/5)

ACAGAGAAACTGGAAAAAAAATTGGAAATGCAGAAAATGCATCTACTACAAAAGAACCCTCTGA

3240
*

AAAATTGGAGTCAACATCTAGCAAAATCAAACAGGAAAAAGTCAAGGGAAAGGCCAAACGGAAA

3300
*

GTAGCTGGGTCGGAAGGCTCCAGCTCCACGCTTGTGGATTACACCAGTACAAGTTCAACTGGAG

3360
*

GCAGTCCTGTGAGGAAATCTGAAGAAAAGACAGATACAAAGCGAACAGTCATTAAAACTATGGA

3420
*

GGAATATAATAATGATAACACAGCTCCTGCTGAAGATGTTATAATTATGATCCAGGTTCCTCAG

3480
*

TCCAAATGGGATAAAGATGACTTTGAGTCTGAAGAAGAAGATGTTAAAACCACACAACCTATAC

3540
*

AGAGTGTAGGGAAACCATCGAGTATTATAAAAAATGTCACTACTAAGCCATCGGCTACGGCTAA

3600
*

GTACACCGAGAAGGAAAGCGAGCAGCCCGAGAAACTGCAGAAGCTTCCCAAGGAGGCGAGCCAC

3660
*

GAGCTGATGCAGCACGAGCTCAGGAGCTCAAAGGGCAGTGCGTCCAGTGAGAAGGGCAGAGCCA

3720
*

AGGACCGGGAGCACTCAGGGTCGGAGAAGGACAACCCTGACAAGAGGAAGAGCGGTGCCCAGCC

3780   3840
*   *

AGACAAGGAGAGCACTGTGGACCGCCTGAGTGAGCAGGGACATTTTAAGACTCTCTCTCAGTCT

3900
*

TCCAAAGAGACCAGGACTTCAGAGAAGCACGAGTCTGTTCGTGGTTCCTCAAATAAAGACTTCA

3960
*

CTCCTGGTAGAGACAAGAAAGTGGACTACGACAGCAGGGATTATTCCAGTTCCAAGCGAAGAGA

4020
*

CGAGAGAGGTGAATTAGCAAGGAGAAAAGACTCTCCTCCCCGGGGCAAAGAGTCTCTGTCTGGG

4080
*

CAGAAAAGCAAGCTGAGGGAGGAGAGAGATTTACCTAAAAAGGGGGCCGAGTCAAAAAAAAGTA

4140
*

ATTCTAGCCCCCCAAGAGACAAAAAGCCTCATGATCATAAAGCCCCCTACGAAACTAAACGCCC

4200
*

ATGTGAAGAGACAAAGCCTGTAGATAAAAACTCTGGGAAGGAGCGGGAGAAGCATGCTGCTGAA

FIGURE 6 (5/5)

4260
*
GCTCGCAATGGGAAAGAGTCCAGTGGTGCAAACTGCCATGTATACCTAACCCGCCAGACCCTCC

4320
*
CATGGAGAAGGAGCTGGCTGCTGGGCAGGTGGAGAAGAGCGCCGTCAAGCCGAAACCCCAGCTG

4380
*
AGCCATTCCTCGAGGCTTTCCTCTGACCTGACCCGGGAGACGAACGAGGCAGCCTTTGAACCAG

4440
*
ATTATAATGAGAGCGACAGTGAGAGTAATGTGTCTGTGAAGGAAGAAGAAGCTGTTGCCAGTAT

4500
*
CTCCAAGGACTTGAAAGAGAAAACAACAGAGAAAGCGAAAGAGAGCTTGACTGTAGCAACGGCC

4560
*
AGCCAGCCAGGTGCAGACAGGAGCCAGAGCCAAAGTAGCCCAGTGTTAGTCAGTAGAGTCATAG

4620
*
CCTTCGGAGCCAGACCCGAAGCCACAGCAGCAGTGCCAGCTCAGCCGGAAGGCCAGGACAGCAA

4680
*
AAAGAAGAAGAAGAAGAAGGAGAAGAAAAACGACAAGAAGCATAAAAAGCACAAGAAGCACAAG

4740   4800
*   *
AAGCACGCAGGCCGACGGCGACGTGGAGAAGAGCCAGAAACACAAACACAAGAAGAAGAAGGCC

4860
*
AAGAAGAACAAAGACAAGGAGAAGGAGAAAGATGACCAAAAAGTGAGATCTGTCACTGTGTGAA

4920
*
GGACGGATGTGTTAATTGACTTAATTACTAAGTCATCTGTATTAAATTCTGTTATAATGTAAAG

4980
*
AGATTCCAGCCTTGTAAATAATGAATGGAAGACCCTGTGCTGCACTTAAAAGTATTTGCTGCTT

5040
*
GATTATTTCATTTTTACATCAGAGCTTTATAACGAACTTTTGTACAGAATTGTGAGTTGTGACC

5100
*
ATGGAACAGTGAGAGGTTTTGCTAGGGCCTATTATTTTTAACCACCATTAATTAGTTGGGGTGG

5160
*
AGTTTACTGTACTGTGAAATTTTCACATTTGAATTTTTTTAATTGCCTGGCAA